Name _____ Date _____

Animals & Dissolved Oxygen

Background: In this experiment, you will observe what happens to animals when the dissolved oxygen levels decrease. Animals, just like plants, need oxygen to survive, even if they live under the water.

Before you begin: Think about different animals that live in and around the water (you don't have to use the specific species; general groups are fine). For each animal you list, write down how it obtains the oxygen it needs to survive.

Animal	How does it obtain oxygen?
Ex: Redback salamander	Keeps its skin moist for easy transport of oxygen (no lungs)

What do you think will happen when you put the fish in the water with low dissolved oxygen? _____
_____
_____

Record your observations. You can either count the number of times the fish opens and closes its' gills, or you can write down general observations about fish behavior.

Fish #1		
Fish #2		

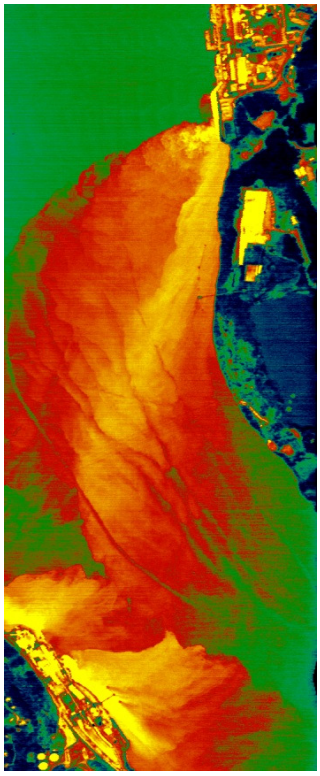
Analyze

1. What was the difference in the behavior of the fish in the normal water and the low DO water? What does this tell you about the importance of DO in water?

_____
_____
_____
_____

2. Can you think of times during the year when the water in the Hudson River might have low dissolved oxygen? Think back to the other experiments you did on temperature, photosynthesis, and light. Describe a situation in which aquatic life might have trouble surviving: _____
_____
_____
_____

3. Look at the picture showing the temperature of the waste water from Indian Point power plant. The yellow/red plume on the upper right hand side is from Indian Point, while the yellow/red plume from the bottom left is the Lovett Power Plant. The water from both of these facilities is taken from the Hudson and then used to cool down generators inside the plants, after which it is returned to the Hudson at a higher temperature.



Source: http://www.ger.com/indpt.jpg

What affect do you think this has on the aquatic life in the Hudson River? What do you think should be done about this problem?

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_____
_____
_____

4. As the temperature of the Hudson River increases due to global warming, what do you think might happen to the organisms that live in the river?
_____
_____
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